

Appl. No. 10/807,853
Amdt. dated October 29, 2004
Reply to Office action of Aug. 6, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application

Listing of Claims:

1. (Currently Amended) An abrading device for abrasion of substantially plane items, said device comprising:

means for conveyance of the substantially plane items in a direction of feed;

suspension means for suspension of a plurality of abrading discs having abrasive means for abrasion of a side of the substantially plane items, wherein the plurality of abrading discs have undercut grooves for reception and fixing of profile rails which form a part of elongated abrasive elements comprising the abrasive means, said grooves preferably extend in a mainly radial direction on a face of the abrading disc;

means for driving rotation of the abrading discs around axes, which are substantially perpendicular to the side of the substantially plane items; and

means for driving the abrading discs in a reciprocatory movement transverse to the direction of feed of the substantially plane items.

2. (Original) An abrading device according to claim 1, wherein the abrasive means extends outwards from a face of the abrading discs.

3. (Canceled)

4. (Currently Amended) An abrading device according to claim 1, wherein the abrading discs are arranged aligned transversely to the direction of feed of the substantially plane items.

5. (Original) An abrading device according to claim 1, wherein the reciprocatory movement of the abrading discs has a length of stroke of 40-100% of a diameter of the discs.

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6. (Currently Amended) An abrading device according to claim 1, wherein the abrading discs are arranged aligned in two successive rows transversely to the direction of feed of the substantially plane items, the discs in one row being staggered with respect to the discs in the other row.

7. (Original) An abrading device according to claim 6, wherein the reciprocatory movement of the abrading discs has a length of stroke of 20-50% of a diameter of the discs.

8. (Original) An abrading device according to claim 1, wherein the abrading discs with abrasive means comprise abrasive lamellae of an abrasive sheet of which the front side has abrasive properties and which extend from a face of the abrading disc.

9. (Original) An abrading device according to claim 8, wherein the abrasive means comprise an elastic support element which support a backside of the abrasive lamellae, said support element substantially having a same length as the lamellae.

10. (Original) An abrading device according to claim 8, wherein the abrasive means are arranged in elongated abrasive elements extending primarily in radial direction on faces of the abrading discs.

11. (Original) An abrading device according to claim 10, wherein the abrasive elements comprise profile rails in which the abrasive means are attached and which are received in undercut grooves in the abrading discs.

12. (Original) An abrading device according to claim 10, wherein holding elements are arranged between the abrasive elements.

13. (Original) An abrading device according to claim 12, wherein each of the holding elements comprises a holding brush having a shorter length than the abrasive elements and which is mounted in a profile rail arranged in an undercut groove.

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14. (Original) An abrading device according to claim 1, further comprising at least one abrading cylinder, which is arranged to abrade a side of the item and which comprises abrasive means extending substantially radially from an elongated core, said abrading cylinder extends transversely to the direction of feed and is driven to rotate about its longitudinal axis.

15. (Currently Amended) An abrading device according to claim 14, wherein the at least one abrading cylinder is arranged after the abrading discs in the direction of feed of the substantially plane items.

16. (Original) An abrading device according to claim 5, wherein the reciprocatory movement of the abrading discs has a length of stroke of 60-85% of the diameter of the discs.

17. (Original) An abrading device according to claim 7, in which the reciprocatory movement of the abrading discs has a length of stroke of 30-43% of the diameter of the discs.

18. (Currently Amended) An abrading device for abrasion of substantially plane items, said device comprising:

a conveyer belt for moving the substantially plane items in a direction of feed;

a common slide;

a plurality of abrading discs mounted on the common slide, the discs including abrasive elements for abrading a side of the substantially plane items, wherein the plurality of abrading discs have undercut grooves for reception and fixing of profile rails which form a part of the elongated abrasive elements, said grooves preferably extend in a mainly radial direction on a face of the abrading disc;

a first motor for driving rotation of the abrading discs around axes, which are substantially perpendicular to the side of the substantially plane items; and

a second motor for driving the abrading discs in a reciprocatory movement transverse to the direction of feed of the substantially plane items.

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19. (Original) An abrading device according to claim 18, wherein the abrasive elements extend outwards from a face of the abrading discs.

20. (Canceled)

21. (Currently Amended) An abrading device according to claim 18, wherein the abrading discs are arranged aligned transversely to the direction of feed of the substantially plane items.

22. (Original) An abrading device according to claim 18, wherein the reciprocatory movement of the abrading discs has a length of stroke of 40-100% of a diameter of the discs.

23. (Currently Amended) An abrading device according to claim 18, wherein the abrading discs are arranged aligned in a plurality of successive rows transversely to the direction of feed of the substantially plane items, the discs in one row being staggered with respect to the discs in another row.

24. (Original) An abrading device according to claim 23, wherein the reciprocatory movement of the abrading discs has a length of stroke of 20-50% of a diameter of the discs.

25. (Original) An abrading device according to claim 18, wherein the abrasive elements comprise abrasive lamellae of an abrasive sheet of which the front side has abrasive properties and which extend from a face of the abrading disc.

26. (Original) An abrading device according to claim 25, wherein the abrasive elements comprise an elastic support element which support a backside of the abrasive lamellae, said support element having substantially a same length as the lamellae.

27. (Original) An abrading device according to claim 25, wherein the abrasive elements are elongated elements arranged primarily in a radial direction on faces of the abrading discs.

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28. (Original) An abrading device according to claim 27, wherein the abrasive elements comprise profile rails in which the abrasive elements are attached and which are received in undercut grooves in the abrading discs.

29. (Original) An abrading device according to claim 27, wherein holding elements are arranged between the abrasive elements.

30. (Original) An abrading device according to claim 29, wherein each of the holding elements comprises a holding brush that displays a shorter length than the abrasive elements and which is mounted in a profile rail arranged in an undercut groove.

31. (Original) An abrading device according to claim 18, further comprising at least one abrading cylinder, which is arranged to abrade a side of the item and which comprises abrasive elements extending substantially radially from an elongated core, said abrading cylinder extends transversely to the direction of feed and is driven to rotate about its longitudinal axis.

32. (Currently Amended) An abrading device according to claim 31, wherein the at least one abrading cylinder is arranged after the abrading discs in the direction of feed of the substantially plane items.

33. (Original) An abrading device according to claim 22, wherein the reciprocatory movement of the abrading discs has a length of stroke of 60-85% of the diameter of the discs.

34. (Original) An abrading device according to claim 24, in which the reciprocatory movement of the abrading discs has a length of stroke of 30-43% of the diameter of the discs.